

Mineral Industry Surveys

For information, contact:

Peter N. Gabby, Acting Zinc Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4957 Fax: (703) 648-7757
E-mail: pgabby@usgs.gov

Samir Hakim (Data)
Telephone: (703) 648-4998
Fax: (703) 648-7975
E-mail: shakim@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

ZINC IN MARCH 2005

Domestic mine production (recoverable) of zinc in March of 62,800 metric tons (t) was about 13% more than in February and about 13% more than in March 2004, according to the U.S. Geological Survey. Estimated smelter production of 22,700 t was 11% less than in February and 22% less than in March 2004. Apparent consumption of 81,200 t was slightly lower than in February and 10% lower than in March 2004.

Domestic mine production (recoverable) of 172,000 t of zinc in the first quarter of 2005 was about 3% higher than in the first quarter of 2004. Estimated smelter production of 73,000 t in the first quarter of 2005 was about 11% lower than in the first quarter of 2004. Apparent consumption of 252,000 t in the first quarter of 2005 was about 13% lower than in the first quarter of 2004.

The Platts Metals Week average composite price for North American Special High Grade zinc increased to 66.49 cents per pound in March. The price was 3.1% (2 cents per pound) higher than in February and 20.3% (11.24 cents per pound) higher than in March 2004.

Update

Canadian mining junior Dia Bras Exploration Inc. announced the first sale of copper and zinc concentrate from the company's Bolivar Mine in Mexico. As of mid-April, the Bolivar Mine had produced 6,900 metric tons (t) of ore and milled 3,500 t of ore having an average grade of 2.69% copper and 7.11% zinc. The mill was upgraded to 200 metric tons per day (t/d) at the end of March and a planned expansion of the mill to 300 t/d was expected to be completed by September (Dia Bras Exploration Inc., 2005).

Yukon Zinc Corp. (formerly Expatriate Resources, Ltd.) has started a \$14 million test-mining and drilling program at the Wolverine zinc-silver deposit in Yukon Territory, Canada. Wolverine is a massive sulfide deposit with resources estimated at 6.2 million metric tons grading 12.6% zinc, 1.55% lead, 1.33% copper, 371 grams per metric ton (g/t) silver, and 1.76 g/t gold (Yukon Zinc Corp., 2005).

The Noranda Income Fund (Canada) produced 66,581 t of zinc in the first quarter of 2005, down from 69,080 t in the first quarter of 2004. Metal production in 2004 was 277,283 t, 4%

higher than in 2003, and was forecast to be about the same for 2005 (Noranda Income Fund, 2005).

China's Zijin Mining Group Co. began constructing a 100,000-metric-ton-per-year zinc smelter in the Inner Mongolia Autonomous Region. The one-line smelter, being built by Zijin Mining's local subsidiary, was expected to be completed in November. The Zijin Mining Group is primarily a gold mining company, though it is the sole operator of the Zijinshan mine in the southeastern Province of Fujian. Zijin Mining also holds a 51% stake in the Ashele copper and zinc mine in the northwestern Xinjiang Uygur Autonomous Region (Metal-Pages 2005d¹).

According to preliminary figures from China's National Bureau of Statistics, zinc output in China rose by 8.6% during March to 230,000 t, bringing the first quarter 2005 total production to 613,500 t, an increase of 2.8% over production in the first quarter of 2004 (Metal-Pages 2005a§).

According to China's General Administration of Customs, exports of unwrought zinc and zinc alloys during the first 2 months of 2005 fell to 26,399 t, a decrease of about 29% compared with that of the same period of 2004 (Platts Metals Week, 2005). China exported 37,694 t of refined zinc in the first quarter of 2005, more than 25% less than in the same period of 2004. Zinc alloy exports for the first quarter of 2005 were down 19.5% from those in the same period of 2004 (Metal-Pages 2005c§). China's refined zinc imports for the first quarter of 2005 rose by 63.3% compared with those for the same period of 2004. Kazakhstan remained the primary supplier (62,044 t) of refined zinc to China, while imports from Australia rose five fold (11,671 t). Zinc concentrate imports rose by 13.2% to 187,889 t, but zinc alloy imports dropped by 11.1% to 42,153 t (Metal-Pages 2005b§).

The U.S. Defense Logistics Agency sold 390 t (408 short tons) of zinc worth about \$525,000 in March to Colonial Metals of Columbia, PA, and US Zinc of Pittsburgh, PA (Defense National Stockpile Center, 2005).

¹References that include a section mark (§) are found in the Internet References Cited section.

A research team at the Institute for Materials Research, Tohoku University, Japan, has developed an inexpensive blue light-emitting diode (LED) using zinc oxide instead of indium gallium nitride (InGaN) or silicon carbide. Blue LEDs are mainly used as a back light in electronic devices such as cellular telephones and as lasers in DVD players. Compared to InGaN, zinc oxide has proven advantages in these applications as well as lower manufacturing costs (Metal-Pages 2005e§).

References Cited

Defense National Stockpile Center, 2005, Stockpile announces zinc BOA sales for March 2005: Fort Belvoir, VA, Defense National Stockpile Center news release, April 5, 1 p.

Dia Bras Exploration Inc., 2005, Dia Bras—First sale of concentrates from Bolivar Mine: Montreal, Quebec, Canada, Dia Bras Exploration Inc. press release, April 13, 2005, 2 p.

Noranda Income Fund, 2005, Noranda Income Fund reports first quarter net earnings of \$6.5 million: Valleyfield, Quebec, Canada, Noranda Income Fund press release, April 28, 18 p.

Platts Metals Week, 2005, China's zinc exports fall 29%: Platts Metals Week, v. 76, no. 15, April 11, p. 15.

Yukon Zinc Corp., 2005, Yukon Zinc Corporation completes mobilization for Wolverine test mining program: Vancouver, British Columbia, Canada, Yukon Zinc Corp. press release, April 5, 1 p.

Internet References Cited

Metal-Pages, 2005a (April 20), Monthly output in China continues to rise, accessed May 9, 2005, via URL <http://www.metal-pages.com>.

Metal-Pages 2005b (April 21), Ni leads China import surge, accessed May 9, 2005, via URL <http://www.metal-pages.com>.

Metal-Pages, 2005c (April 22), Sn exception to China export drop, accessed May 9, 2005, via URL <http://www.metal-pages.com>.

Metal-Pages, 2005d (April 22), Zijin Mining starts building new Zn smelter, accessed May 9, 2005, via URL <http://www.metal-pages.com>.

Metal-Pages, 2005e (April 11), ZnO may replace InGaN in blue diodes, accessed May 9, 2005, via URL <http://www.metal-pages.com>.

TABLE 1
SALIENT ZINC STATISTICS¹

(Metric tons, unless otherwise specified)

	2004	2005			
	January- December	January	February	March	January- March
Production:					
Mine, zinc content of concentrate	739,000	56,000 ^r	58,100 ^r	65,500	180,000
Mine, recoverable zinc	713,000	53,600 ^r	55,700 ^r	62,800	172,000
Smelter, refined zinc	320,000	24,600 ^e	25,600 ^e	22,700 ^e	73,000 ^e
Consumption:					
Refined zinc, reported	421,000	33,600	33,900	34,100	102,000
Ores ^e (zinc content)	727	61	61	61	182
Zinc-base scrap ^e (zinc content)	191,000	15,900	15,900	15,900	47,600
Copper-base scrap ^e (zinc content)	176,000	14,700	14,700	14,700	44,000
Aluminum-and magnesium-base scrap ^e (zinc content)	1,430	120	120	120	359
Total ^e	790,000	64,300	64,700	64,900	194,000
Apparent consumption, metal ²	1,160,000	88,700	82,200	81,200	252,000 ³
Stocks of refined (slab) zinc, end of period:					
Producer ⁴	XX	9,860	11,000	9,760	XX
Consumer ⁵	XX	57,200	57,200	56,300	XX
Merchant	XX	10,200	10,200	10,200	XX
Total	XX	77,300	78,500	76,300	XX
Shipments of zinc metal from Government stockpile	28,900	--	--	--	--
Imports for consumption:					
Refined (slab) zinc	812,000	58,000	56,400	NA	114,000 ⁶
Oxide (gross weight)	103,000	8,030	7,780	NA	15,800 ⁶
Ore and concentrate (zinc content)	231,000	3,490	18,800	NA	22,300 ⁶
Exports:					
Refined (slab) zinc	3,300	252	60	NA	312 ⁶
Oxide (gross weight)	14,400	811	783	NA	1,590 ⁶
Ore and concentrate (zinc content)	745,000	22,300	5,380	NA	27,700 ⁶
Waste and scrap (gross weight)	53,900	3,220	4,150	NA	7,370 ⁶
Price:					
London Metal Exchange, average, dollars per metric ton	\$1,047.35	\$1,245.81	\$1,325.81	\$1,377.33	\$1,316.32
Platts Metals Week North American Special High Grade, average, cents per pound	52.47	61.54	64.49	66.49	64.17

^eEstimated. ^rRevised. NA Not available. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; except prices; may not add to totals shown.

²Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

³Data based on reported consumption, stocks, and estimated trade data.

⁴Data from U.S. Geological Survey and American Bureau of Metal Statistics.

⁵Includes an estimate for companies that report annually.

⁶Includes data through February only.

TABLE 2
REFINED ZINC PRODUCED IN THE UNITED STATES¹

(Metric tons)

Month	Beginning stocks ²	Production	Shipments	Ending stocks ²
2004:				
March	5,230	28,900	28,200	5,960
April	5,960 ^e	29,600	28,300	7,300
May	7,300 ^e	28,600	28,300	7,660
June	7,660 ^e	28,600 ^e	29,900	6,340
July	6,340 ^e	29,200 ^e	29,200	6,390
August	6,390 ^e	29,300 ^e	29,300	6,370
September	6,370 ^e	24,100 ^e	23,400	7,020
October	7,020 ^e	23,800 ^e	23,700	7,070
November	7,070 ^e	23,500 ^e	23,800	6,780
December	6,780 ^e	20,200 ^e	20,500	6,430
January-December	XX	320,000	321,000	XX
2005:				
January	6,430 ^e	24,600 ^e	21,200	9,860
February	9,860 ^e	25,600 ^e	24,500	11,000
March	11,000 ^e	22,700 ^e	24,000	9,760
January-March	XX ^e	73,000 ^e	69,700	XX

^eEstimated. XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes stocks held at locations other than smelters.

Sources: U.S. Geological Survey and American Bureau of Metal Statistics.

TABLE 3
APPARENT CONSUMPTION OF REFINED ZINC
ACCORDING TO INDUSTRY USE AND PRODUCT¹

(Metric tons)

Industry and product	2004	2005			January- March
	January- December ²	January	February	March ²	
Galvanizing:					
Sheet and strip	477,000	36,300	33,500	33,900	104,000
Other	167,000	12,300	11,100	10,700	34,100
Total	644,000	48,600	44,600	44,600	138,000
Brass and bronze	188,000	14,200	13,300	12,700	40,200
Zinc-base alloy	244,000	19,000	17,700	17,500	54,200
Other uses ³	85,800	6,900	6,500	6,400	19,900
Grand total	1,160,000	88,700	82,200	81,200	252,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on reported consumption, stocks, and estimated trade data.

³Includes zinc used in making zinc dust, desilvering lead, powder, alloys, anodes, chemicals, castings, light metal alloys, rolled zinc, and miscellaneous uses not elsewhere specified.

TABLE 4
AVERAGE MONTHLY ZINC PRICES¹

Period	North American ¢/lb.	LME ² cash	
		¢/lb.	\$/t
2004:			
March	55.25	50.14	1,105.37
April	52.09	46.82	1,032.28
May	51.76	46.63	1,027.93
June	51.33	46.32	1,021.08
July	50.08	44.81	987.94
August	49.44	44.24	975.39
September	49.23	44.22	974.83
October	53.31	48.28	1,064.49
November	54.81	49.68	1,095.18
December	58.53	53.52	1,179.83
January-December	52.58	47.47	1,046.43
2005:			
January	61.54	56.51	1,245.81
February	64.49	60.14	1,325.81
March	66.49	62.47	1,377.33
January-March	64.17	59.71	1,316.32

¹Special High Grade.

²London Metal Exchange.

Source: Platts Metals Week.

TABLE 5
U.S. EXPORTS OF ZINC¹

Material	2004		2005 ²			
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	3,300	\$5,330	60	\$120	312	\$703
Ore and concentrate (zinc content)	745,000	413,000	5,380	3,960	27,700	12,100
Waste and scrap (gross weight)	53,900	48,300	4,150	4,010	7,370	7,130
Powders, flakes, dust (zinc content)	7,640	13,500	748	1,650	1,460	2,860
Oxide (gross weight)	14,400	19,800	783	1,600	1,590	2,850
Chloride (gross weight)	1,870	2,200	159	211	385	513
Sulfate (gross weight)	3,060	1,860	145	93	395	245
Compounds, other (gross weight)	194	711	102	75	252	216

¹Data are rounded to no more than three significant digits.

²Data for March 2005 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF ZINC¹

Material	2004		2005 ²			
			February		Year to date	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	812,000	\$888,000	56,400	\$71,700	114,000	\$142,000
Ore and concentrate (zinc content)	231,000	98,700	18,800	14,200	22,300	16,300
Waste and scrap (gross weight)	10,800	7,740	500	456	1,110	935
Powders, flakes, dust (zinc content)	24,800	40,200	2,010	3,690	3,760	6,500
Oxide (gross weight)	103,000	89,000	7,780	9,080	15,800	16,900
Chloride (gross weight)	705	863	26	73	132	231
Sulfate (gross weight)	29,100	14,000	2,010	1,110	5,440	2,660
Compounds, other (gross weight)	4,660	4,230	282	328	811	793

¹Data are rounded to no more than three significant digits.

²Data for March 2005 were not available at time of publication.

Source: U.S. Census Bureau.

TABLE 7
SHIPMENTS OF ZINC METAL FROM THE NATIONAL
DEFENSE STOCKPILE¹

(Metric tons)

Period	Beginning inventory	Shipments	Ending inventory
2004:			
March	91,900	2,920	89,000
April	89,000	3,340	85,600
May	85,600	14,700	70,900
June	70,900	1,170	69,800
July	69,800	44	69,700
August	69,700	3,360	66,400
September	66,400	--	66,400
October	66,400	--	66,400
November	66,400	--	66,400
December	66,400	--	66,400
January-December	XX	25,500	XX
2005:			
January	66,400	--	66,400
February	66,400	--	66,400
March	66,400	--	66,400
January-March	XX	--	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: Defense Logistics Agency.

TABLE 8
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY^{1,2}

(Metric tons)

Material and country	General imports			Imports for consumption		
	2005			2005		
	2004	February	Year to date	2004	February	Year to date
Ore and concentrate (zinc content):						
Australia	27,900	--	--	27,900	--	--
Ireland	17,700	4,410	4,410	17,700	4,410	4,410
Mexico	6,530	369	900	6,530	369	900
Peru	178,000	14,000	17,000	178,000	14,000	17,000
Other	877	--	--	877	--	--
Total	231,000	18,800	22,300	231,000	18,800	22,300
Blocks, pigs, or slab:						
Australia	7,940	1	1	27,500	2,000	2,480
Brazil	26,400	3,170	8,050	26,400	3,170	8,100
Canada	501,000	40,300	78,000	501,000	40,300	78,000
China	35	--	--	16,500	--	502
Japan	--	--	--	690	--	--
Kazakhstan	2,310	--	--	2,310	--	--
Korea, Republic of	8,030	--	--	31,900	--	813
Mexico	123,000	10,900	23,600	123,000	10,900	23,600
Namibia	47,900	--	--	47,900	--	--
Peru	25,600	18	18	30,500	18	616
Poland	--	--	--	--	--	--
Other	204	--	--	3,970	--	225
Total	743,000	54,400	110,000	812,000	56,400	114,000
Dross, ashes, fume (zinc content)	16,100	1,350	2,360	16,100	1,010	2,360
Grand total	990,000	74,500	134,000	1,060,000	76,200	139,000
Oxide (gross weight):						
Canada	49,700	3,960	8,410	49,700	3,960	8,410
China	207	1	38	207	1	38
Italy	13,400	1,390	2,550	13,400	1,390	2,550
Japan	1,060	13	110	1,060	13	110
Mexico	33,200	1,910	3,650	33,200	1,910	3,650
Netherlands	4,700	418	883	4,700	418	883
Other	796	82	172	796	82	172
Total	103,000	7,780	15,800	103,000	7,780	15,800
Other (gross weight):						
Waste and scrap	10,800	500	1,110	10,800	500	1,110
Sheets	2,500	118	334	2,500	118	334
Powders, flakes, dust (zinc content)	24,800	2,010	3,760	24,800	2,010	3,760

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data for March 2005 were not available at time of publication.

Source: U.S. Census Bureau.